INVESTING IN PRODUCTIVE INFRASTRUCTURE

John Newton, asocialdemocraticfuture, December 2017.

Asocialdemocraticfuture went live in September 2009 with the professed aim to offer a forum for those, regardless of party affiliation or of none, who want to contribute to a new politics, marked by social democratic values guiding strategic policy development, rather than relying upon tactical interventions geared to the short-term control of news agenda. It noted that the latter defined the political methodology of New Labour under Tony Blair and Gordon Brown, and that its continuing application would risk becoming the death knell of Labour as a creative political force.

The contours of British politics have, however, changed beyond recognition in the tumultuous times that have since passed. Most recently, the June 2017 election of a hung parliament left Jeremy Corbyn within striking distance of 10 Downing Street.

The core guiding values of asocialdemocraticfuture remain unchanged, however. Policy development and choices should be driven by, and assessed against, the primary social democratic yardstick: expanding lifetime opportunities for low and middle-income households, particularly the poor and disadvantaged.

Sustainable and efficient economic growth, balanced in its distributional composition, is a vital, but not sufficient, condition for securing progress against that yardstick. Value-based strategic and sustainable policy development, rather than populist gestures, is required, as well.

Social democratic progress, certainly, cannot simply wait for, or rely upon, the re-election of a Labour government. In order to change the political parameters of feasible action on a sustainable basis, an incoming government needs its successors to continue along, or, at least not break up the strategic tramlines that it intends to, actually does to set during its term of office. The development of an overlapping and sustainable technical and political consensus, albeit often implicit, that can advance social democratic values and the national interest, must play a key part in that process.

Asocialdemocraticfuture is focused on a political future set by such realities. Its prime purpose is to contribute to the identification and development of policy that can move along strategic social democratic tramlines. A balanced employment-creating economy refocused towards production rather than consumption, the reduction of inequalities in income, wealth, and opportunity, the provision of universal core public services at high quality and at sustainable cost, the development of a housing system that contributes to sustainable growth rather than boom-bust, and which actually delivers affordable housing to the young and those of moderate means, not windfall gains to the established: all these central and related core social democratic ends need to be integrated within feasible overarching policy frameworks.

Time for a social democratic surge.pdf outlines the relationship between post war keynesianism, neo-liberalism, and the Great Financial Crash (GFC). It notes that the intellectual pendulum has tilted away from neo-liberalism and back towards social democracy. It pinpoints the urgency of harnessing that opportunity by unwinding the

UK housing double bind, which is explained in more depth in ..\INTRODUCTION2017.pdf .

Consistent with that, an overarching high-level strategic reform framework, linking the wider economy and the housing system, is set out in Widerhousingends.pdf

A 2018 Housing series will relate strategic housing policy development to wider housing ends in a series of papers that will be published on the website.

This paper out a summary case for planning, providing, and safeguarding levels and types of public investment, effectively and efficiently delivered, that are consistent with sustained and balanced growth as part of a set of strategic reforms to the UK public expenditure system.

Other papers will focus on specific proposals to match the need and demand for quality public services and their associated funding requirements with more efficient and sustainable funding sources. This will be within a context set by brexit-linked uncertainty that threatens to shroud the UK's future economic prospects and to put further pressure on the public finances, presided over by a fragile conservative minority administration.

The level and quality of investment in economic and social infrastructure directly influences future macro-economic performance. It must not only be sufficient relative to the economy's infrastructural requirements, but the selection, the development, and the delivery of projects must also be efficient.

The volume of productive infrastructure investment since the seventies has fallen well below levels required by a UK macro economy that has steadily has become structurally over-dependent on debt-financed consumption. A major driver of that is that its public expenditure, accounting, management system possesses an in-built bias against investment. This is largely because the budgetary cost of providing a publicly-provided asset is front-loaded during its inception, construction, and mobilisation phases, concentrated at the beginning of a project.

Consequently investment projects can be postponed at often far less political cost than is the case with current programmes that have built up a user constituency. Their postponement or cancellation score greater savings to near-term, rather than long-term budgets – an outcome particularly helpful to governments seeking to secure headline public expenditure savings or poorly specified fiscal rule targets. The other side of that coin is that the benefits of investment projects are spread over their entire life, often rising with time. A cash-based public expenditure system fails to register these future benefits.

At the same time, the planning, the prioritisation, and the delivery of public investment projects have often been woeful, causing further economic damage. Examples abound: the white elephant of the Millennium Dome; more recently the massive cost over-runs on the recent Network Rail railway electrification programme.

The rectification of these related problems requires inter-locking institutional reform.

<u>Background</u>
From 1950 to the late seventies, public net investment, expressed as a ratio of gdp, never fell below 3.2%; between April 1966 and March 1971 it exceeded 6%, peaking at 7.4% during 1967-68[1]. It then collapsed progressively to less than 0.5per cent of GDP by 1988-89, or barely one per cent of total public expenditure. Public investment was crowded-out by excessive levels of mainly mortgage-based private borrowing during the lawson boom, which seriously overheated the economy.

Striking examples of public squalor amid private affluence, such as the creaking and antiquated railway infrastructure of london and south-east, made infrastructural capacity a media and political issue. An overlapping technical and political consensus soon emerged that public investment had fallen below an economically optimal or sustainable level, and that it needed to increase again.

And, indeed, public investment from that record low base did recover in the early nineties to 1.9% of gdp. But the impact of recession compounded by historically high

[1] This was a period when central government funded directly the investment programmes of the nationalised industries and utilities; post-privatisation investments have been funded privately, so the figures are not directly comparable, but this only partially explains the difference. On the other side of the equation, the relative cost of public housing investment during the early post war period was reduced by lower land costs, which have quadrupled in real terms since 1970.

interest rates had by then begun to damage the public finances again. In order to regain a balanced budget or surplus, the major government found it politically easier to cut future planned investment than to make inroads into existing current programmes involving visible reductions in services and jobs. Investment fell back to below 1% of gdp during the remainder of the decade.

After the election of new labour in 1997, a rules-based fiscal framework was introduced. The golden rule permitted borrowing to fund investment over the duration of an economic cycle, but not current spending producing benefits over a period of less than one year. A second sustainable investment fiscal rule was also introduced that held that net public debt should be kept at a stable and prudent level, which was taken to mean to reducing it, as a proportion of gdp, to below 40%.

It was felt that this second rule was necessary in order to safeguard against uncontrolled levels of public investment pushing up the debt burden to the point that a future economic shock exposed the government to the risk of a future public finance crisis, marked by a high and escalating debt ratio. Concern was also expressed that the financial costs of such investments imposed excessive claims on future taxation revenues contrary to the requirements of inter-generational fairness, especially where project benefits were social, rather than financial or economic. The claims of rising debt servicing costs on taxation revenues within a macro economic policy framework, characterised by the use of monetary policy to achieve an inflation target, also risked higher interest and taxation rates with attendant downward impacts on growth[2].

Notwithstanding the introduction of the golden rule, under new labour and subsequently, a tendency to discriminate against investment expenditures has remained within a cash-based public expenditure system, largely the product of the front-loading of investment costs into the short term and their immediate impact on headline total expenditure and net debt levels.

Nor was there any particular evidential justification for the setting of a precise 40% ratio. In actuality, the impact of the Great Financial Crash (GFC) on the public finances – largely an external shock resulting from leveraged international lending on sub-prime US mortgage assets - rendered the sustainable investment rule redundant: it was widely recognised that public borrowing needed to increase in order to prevent a re-run of the 30’s depression. Ironically, or, perhaps, inevitably because of unbridled financial liberalisation linked to the ascendancy and over-reach of neo-liberalism during the previous three decades, the rule was scuppered by excess private, not public debt.

The ordering of the golden and sustainable investment fiscal rules, in addition, produced a perverse incentive for public infrastructure assets to be procured off-balance sheet. This was through public-private partnership (PPP) arrangements, including the private finance initiative (PFI). Their up-front capital costs, depending on their accounting treatment, were not counted as public expenditure; and thus generally did not add to either the recorded fiscal deficit or net public debt totals,

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[2] Chapter 9, *Reforming Britain’s Economic and Financial Policy,* edited by Ed Balls and Gus O’Donnell, HM Treasury, 2002, provides an inside account of the official reasoning.

unlike directly financed public projects. But client commissioning authorities have had to pay annual reoccurring charges covering financial, provision, maintenance, and private profits, over 30 year or other long-term project time horizons, bequeathing long-term financial public revenue liabilities that do add to future public expenditure and net debt.

Uunderspending of departmental capital budgets actually proved to be even a more serious brake on achieving a higher investment outturn. For example, during 2005-6, recorded net public investment was more than ten per cent less than the £26bn that had been projected two years earlier. Overall, net public investment compared to gdp, under new labour, recovered only slowly to exceed 2% in 2004-2005, before peaking at 3.4% between 2008-10, but still well below average post-war levels.

The coalition government in 2010, with George Osborne at the helm of the public finances as chancellor, let investment again to bear the brunt of cuts in public expenditure it made to reduce the public deficit that had ballooned to record levels as the result of the GDC. His landmark 2010 public expenditure review ushered-in a fiscal austerity programme that led to massive cuts to capital programmes, which pro-cyclically dampened future demand. The golden rule was jettisoned and replaced by a rolling five year target to balance the budget, including capital spending. Most notably, the housing capital programme was reduced by over 40% in cash terms, just when total new housing supply was collapsing to record low levels.

Since 2010 the net public investment/gdp ratio in outturn has remained stable at around 2.1%, a figure that is actually higher than was achieved for much of the new labour period. The problem is that gdp denominator due to muted recovery and stagnant productivity has hardly risen since 2009. The depth and duration of the downturn meant that the level of public investment was inadequate when it should have been substantially increased in order to provide needed fiscal stimulus to the economy.

In the wake of the GDC, excess corporate saving produced an investment dearth within the economy; a structural dearth that should have been, and still needs to be, offset by substantially higher sustainable levels of productive public investment as a structural, rather than purely counter cyclical response, to that problem. Productivity the primary driver of output and income growth, slumped to well below its post war average of 2.3%; it appears to have a settled at a persistent 'new normal' level, barely above 1%.

In that light, subsequent efforts to restore the public finances to balance and to reduce the public debt ratio were stymied, continuing recession followed by a muted recovery based on a return to debt-financed consumption, and now by stagnation. Relying on monetary policy – either record low interest rates or unconventional quantitative easing which increased asset prices rather than output directly – proved, empirically, to be a forlorn hope.

This was predicted by many economists who pointed out that relying on monetary policy ignored the fact that as nominal rates had already fallen in 2009 to such record levels close to zero that there was little or no scope for further cuts to have any macro-economic impact on output and growth; the main monetary policy lever had therefore lost it potential effect: in technical New Keynesian parlance, interest rates had reached their zero lower bound (ZLB); consequently fiscal expansion and public investment in particular was needed instead to engineer a recovery that would allow interest rates to rise again to the point where they could fulfil their counter-cyclical role to smooth the business cycle and stabilise demand over the medium term[3].

Other commentators, notably Martin Wolf of the Financial Times, argued cogently and consistently that with real interest rates at record low levels, the case in support of investing in economic and social infrastructure was overwhelming: investing in housing and new transport infrastructure would generate economic returns greatly in excess of their cost. Their future impact on improved connectivity and access to affordable housing in high cost areas would have enhanced future productive capacity and productivity, while the direct positive impact on short term gdp could have as been as high as 3%. Moreover, increased investment would have helped to avoid 'hysteresis' effects, where the longer term productive capacity of economy is reduced by the loss of skills and plant. In short, fiscal austerity concentrated on investment involved a triple adverse whammy.

That the macro-economic justification for austerity was conflated with a political objective to shrink the state became clearer when a conservative majority administration was elected in 2015. An overall budget surplus was targeted by 2019-20, and every year subsequently, unless growth fell below 1 per cent, while the wider benefits of a smaller state were extolled.

The brexit referendum result in June 2016 then further unsettled the economy. With the replacement of David Cameron as prime minister by Theresa May, who promptly consigned osborne to the backbenches, the austerity tone softened, but not definitively. It was only the debacle of the 2017 election result, reducing the conservatives to a minority government facing the spectre of a populist Jeremy Corbyn-led labour government, that realisation dawned that continuing austerity might not be economically, socially, or politically sustainable.

Public investment levels were maintained and even increased in both the 2017 budgets, at least in future planned levels, projected to reach 2.3% of gdp by the end of the parliament in 2022. Planned levels, however, do not necessarily, or often, translate into realised levels, and remain well below the levels required by the macro economy. They will continue to be constrained by a new fiscal mandate that requires the structural or cyclically-adjusted deficit to fall below by 2% in 2020-21, supported by a supplementary target that requires public sector net debt to fall as a share of gdp between 2019-20 and 2020-21.

The achievement of such arbitrary fixed year targets depend on the short-term performance of the macro-economy, linked to brexit developments, and for that reason most commentators do not expect them to be realised but rather either kicked into the long grass or extended. A risk exists also that in an attempt to

[3] Simon Wren-Lewis has been one of the most prominent and consistent advocates of such a new Keynesian approach. See his blog, https://mainlymacro.blogspot.co.uk/, and search fiscal policy or fiscal rules.

achieve such mispecified fixed term targets planned investment – true to past form – will be cut or postponed in order to secure short term savings.

The setting of such fixed year targets that fail to distinquish between investment and current spending, meanwhile, discourages the allocation of the resources to infrastructural projects that are to needed if the UK economy is to recover a high growth and productivity trajectory. These include Crossrail 2, the expansion of a publicly-financed and enabled affordable housing programme sufficient in scale to overcome britain's broken housing market, and public investment seed-corn financing of potential growth areas and other new technologies that could help to ratchet-up the UK sustainable growth rate, such as such as drug therapies and robotics. Without such public investment pump-priming and partnership these areas will be under-invested support - due to various market failures - and future potential growth will be stillborn and lost.

Indeed future public investment requirements cannot be divorced from measures that are needed to correct the downward secular productivity trend that since the GFC has so afflicted the UK economy. It is that trend that needs to be reversed over the medium term, if the public finances are to be restored on a sustainable basis. Put simply, focusing on the public deficit as a first order objective is confusing cause and consequence. Post-2010 fiscal austerity has proved to be a contributory factor that prolonged recession and stagnation in the UK, relative to most other industrialised countries.

Future sustained and balanced growth requires higher sustained levels of both public and private investment. Economically damaging pro-cyclical variations in investment levels must be discouraged. The institutional tendency for departments to under-spend their capital budgets must also be overcome in tandem.

Securing and maintaining an optimal level of public investment: a minimum investment fiscal rule supplemented by institutional reform to improve the selection, prioritisation and delivery of projects

A revamped rules-based approach to public investment planning in the post GFC economic environment is thus required. The remaining bias against investment spending within the cash-based public expenditure planning system should be lifted.

Labour included in its 2017 manifesto a new fiscal credibility rule: achieve a balance on the current budget over a rolling five year forecast and for the national debt to fall as a share of trend gdp over the span of a parliament, with the independent Office for Budget Responsibility (OBR) acting as a fiscal council in charge of judging whether these targets were on course to be met. The deficit target would not include investment, meaning a future labour government could meet its rules while still increasing investment on infrastructure through borrowing. Labour's new rules would also be suspended if the Bank of England's Monetary Policy Committee (MPC) judged that it could not reduce its policy interest rate any further to stimulate growth, or, in other words rates were at their zero lower bound.

The proposed fiscal credibility rules still do not lift the in-built bias against investment within a cash-based public expenditure system Investment could continue to be potentially constrained below its economically optimal level by a requirement for net public debt to fall over the lifetime of a parliament. Cutting planned public investment projects could still provide higher and more politically palatable savings in the short term due to their front-loading of costs, despite their economic utility. It is not clear that the MPC would be prepared to make declarations on the applicability of ZLB to the fiscal rules without further and quite likely contentious further institutional changes to the macro-economic and institutional environment it operated within.

In essence, if investment projects, whether directly publicly-funded or privately-financed but publicly-subsidised, are correctly selected and prioritised they should either add to future economic output or save future maintenance costs in excess of their investment costs. Insofar that the net public ratio is unlikely to increase while the real interest rate is below the real growth rate, it is to be expected that rising real interest rates would follow increased growth, but that cannot be taken granted given the inflation remit of the MPC. In practice gdp growth, or the lack of it, will continue to provide the primary driver of fiscal sustainability.

Looking forward towards the medium term, a real fear is that gdp prospects will be undermined by brexit-related uncertainty and/or loss of single market and customs union benefits with corresponding adverse impacts on the public finances, which, at best, will continue to stall recovery or, at worst, will induce another recession or stagflation.

Accordingly a case can be made for institutionally safeguarding investment from further economically damaging and ultimately self-defeating short-term cuts by instituting a minimum investment rule.

<u>A minimum investment rule</u>

The responsibility for setting a minimum rule could be delegated to an independent body of economists and others possessing both the experience and expertise to assess the optimal level of public investment within the economy, as well as the requisite credibility with the wider financial and economic community.

This body would exercise this delegated task on a similar basis that the MPC exercises its delegated interest rate policy remit. Such independence would be consistent with public investment levels being set in accordance with macro-economic requirements rather than contingent political pressures.

The primary aim of such a rule would be to align investment in economic and social infrastructure with the needs of the macro-economy and to protect such investment from cyclical and contingent public expenditure pressures. A rules-based approach that required investment planning to respond to infrastructural funding requirements rather than to cyclical pressures should reap substantial efficiency gains.

These should spring from two inter-linked sources. First, the achievement of greater certainty in fiscal planning; uncertainty about future allocations still undermines efficient public planning and programming of projects. A minimum investment rule therefore would supplement and support linked institutional reforms to improve the efficiency of public investment across its selection, co-ordination and delivery aspects.

The extension of a rules-based approach to public investment planning should thus act as a check to inadequate public planning, programming and management of investment programmes. For instance, if the minimum investment rule was breached due to a departmental under-spend of its capital budget, its permanent secretary should be obliged to write an open joint letter to the chancellor, explaining why this had occurred, attached with remedial measures. Any repetition would require both the chancellor and the offending department to report to the Public Accounts Committee.

Second, boom-bust tendencies in the construction and other supply industries could be smoothed if such greater fiscal certainty was complemented by a greater degree of partnership planning between the public and private sector of investment. The institutional and policy environment should incentivise both public and private providers of infrastructure to develop positive supply-side practices in relation to supply chain management and the training and use of labour. This should help to avoid the worst pitfalls of boom-bust in the construction industry that has so bedevilled past progress and to contribute to the achievement of more balanced growth in spatial and distributional terms.

Such a rule, however, does present some clear challenges. If the current definition of public investment remained unchanged, it could provide an in-built bias in favour of direct public procurement. Departments would come under pressure by the rule to fund a certain level of directly financed public investment and to choose direct financing of investment when an alternative procurement route could be more efficient. This would be inconsistent with the establishment and maintenance of a level playing field, where procurement routes were chosen due to their whole project-life efficiency relative to other options.

It could mirror, but in reverse, the bias that the sustainable investment rule can exert in favour of private financing of infrastructure. Such a reverse bias could possibly be avoided by widening the definition of public investment to include all investment on defined economic and social infrastructure assets, regardless of financing source.

That, however, could throw up some formidable measurement and definition issues. The contribution of the private sector contribution to the total investment figure would also not be under the direct control of sponsoring departments. On the other hand, the disciplining effect of such a rule should be beneficial. And by highlighting under-spends, whether of public or private origin, relative to an investment target set with regard to infrastructural funding requirements, should help to induce a policy environment more conducive to their correction.

Project selection and delivery

Poorly selected projects will generate sub-optimal economic outcomes, even where their contractual arrangements, their structuring of public-private inputs relative to project circumstances, and their execution is efficient. More usually, however, the processes that result in projects being poorly selected continue to impact and be compounded across the entire project lifecycle.

All these considerations underline the need for robust, transparent, and credible appraisals of both the net individual and relative economic worth of projects, compared to alternatives. Greater accuracy and transparency in the production of these should help to maintain financial market confidence in institutional rule-based arrangements that safeguard public investment at a level consistent with sustainable long-term economic growth.

An optimal ranking of the relative macro-economic worth of competing projects is, however, difficult to achieve for many reasons. These include the complexity of the wider policy environment in which such selection and prioritisation has to take place, the existence of not only competing multiple objectives, but also contingent political pressures that can favour some projects for reasons other than their economic worth. On top of all that there are capacity constraints within the public sector in relation to the implementation of such processes. And, project appraisal methodologies, like all economic tools, are also only as robust as their underlying assumptions allow them to be.

A start has to be made in that direction, however. The institutional environment in which project selection and prioritisation occurs can be put on a much firmer footing. Departments should be required to produce an annual Departmental Investment Plan (DIP) in consultation with the National Infrastructure Commission (NIC).

Crucially, the NIC should be provided with a remit to prioritise, co-ordinate, and sequence projects according to their estimated economic and social return at a pan-government level. The sheer scale of public investment requirements with, for example, HS2 projected to require up to £56bn, Crossrail 2 up to £32bn, which compares to the expected outturn cost of c.£15bn for Crossrail 1. It is imperative for the public planning of such major infrastructure projects to be co-ordinated more effectively, therefore; for example, if the provision of Crossrail 2 is not sequenced with the delivery of HS2, there is a risk that the central london tube network will be overwhelmed.

It should also be tasked to expand the pool of personnel skilled and experienced enough to conduct the project appraisals underpinning the plans. Partnerships with universities and the private sector could also be developed in order to develop the methodological base and to enlarge and deepen the skill set of those undertaking the appraisals.

The National Audit Office should audit each DIP and the methodological base applied to rank projects.

<u>Conclusion</u>
The achievement of both economic efficiency and social justice requires a public investment programme that enjoys greater certainty of funding, aligned to the future structural requirements of an economy that has to become more investment-rather than consumption- based. Its growth drivers are tilting towards manufacturing sectors based on high level research and development and new technologies, which need to be supported by construction sector, with more stable and steady state output and improved employment and supply chain practice.

A reformed rules-based system should safeguard investment levels, given their particular exposure to contingent short-term pressures on the public finances. Labour's new fiscal credibility rule provides a good starting point, but it still fails to address wholly the in-built bias present in a cash-based public expenditure system against public investment. It could be supplemented by the establishment of a dedicated minimum investment rule, set and monitored by a dedicated fiscal council or body independent of government.

Just as vital in securing an economically optimal level of public-financed or enabled (through partnership with private sector involving a mix of public and private finance) investment in productive infrastructure, is the attainment of greater efficiency in the selection, planning, co-ordination and execution of public investment projects, Indeed both must go in hand, as the demonstration of efficiency will assist governments to maintain the confidence of the financial markets in borrowing for investment at the higher levels that are required.

More robust and transparent investment appraisal methodologies need to be applied to assess the relative economic and social returns offered by projects, allowing them to be ranked in order of funding priority. Greater accountability and transparency could be obtained by requiring sponsoring departments to work in partnership with the National Infrastructure Commission (NIC) to publish annual Departmental Investment Plans (DIP's) that incorporate auditable information supporting and evidencing the business case for the selection of projects and their relative ranking, including assessment of the quantum and composition of their future benefit flows of relative to their costs.

The NIC should also be provided with a superior remit to ensure that complex long term projects across and within government departments are planned, co-ordinated, and sequenced in a co-ordinated and efficient manner consistent with the attainment of more timely and less costly outcomes.

The current minority conservative government plans to maintain net public investment in the 2.1-2.3% of gdp range. That is not low by recent historical standards, but is insufficient to meet the requirements of a UK economy that must escape from a low productivity trap and from brexit uncertainty. Realistically, in the short term, the protection of planned programmes from cuts driven by its misspecifed fixed and undiscriminating fiscal mandate and its subsidiary rules, remains a key concern.

Existing plans should be supplemented by the addition of projects that clearly would most improve connectivity and productivity in the nearer term, such as upgrading trans-pennine and other regional transport networks, the establishment of a nascent but focused industrial strategy, and additional public investment in affordable housing. The addition of a minimum investment rule could help in that respect.

There appears little reason for the measures proposed above to maximise the economic and social return of a given investment programme, not to be put in hand without delay.

That is imperative as undoubtedly there is, and will continue to be, a structural rather than a counter cyclical need to increase and maintain levels of effective and efficient investment in productive infrastructure, during a period when political and fiscal attention will continue to focus on the state of the public finances. That is bound to suffer continuing strain in a stagnant economy facing an uncertain post brexit future, where demands for public services continue to rise, but the means to pay for them are undefined or suppressed.

A continuing increased level of public investment will need to be justified within that constrained fiscal context; the development of institutional arrangements surrounding the selection and delivery of public investment projects consistent with the demonstration of their evidenced contribution to future growth should provide a more effective alternative to rigid fiscal rules that continue to bear down most on investment spending.

Turning to future funding demands on the public purse, other reforms need to be developed and sequenced in order to align the public expenditure on needed infrastructure with the future benefits and increased values generated by such investment, and where possible to minimise their direct funding claims on general taxation resources in contrast to those whose assets or incomes increase as a result of such investment.

Crossrail 1 was funded by a third contribution from a business rate levy, form TfL, and from central government, but their agreement delayed the project by years. Land value capture mechanisms linked to continuing and further reform to the compulsory purchase rules could provide collateral for public borrowing linked to tangible future repayment streams[4].

Likewise reforms to the planning and housing system to deflate land costs directly, whose real quadrupling since 1970, in step with financial liberalisation has so increased the real unit of public investment in housing as well as its entry cost for first time buyers[5].

Such mechanisms need, however, to be developed without procrastination in a way that provides certainty to relevant stakeholders. They also need to be underpinned by some degree of cross party support.

Scanning further, the complementarity of fiscal and monetary policy could be strengthened by the re-focusing of the QE bond purchasing programme towards productive investment directly, rather than relying on QE acting on asset prices through an indirect, uncertain, and empirically largely ineffective, wealth transmission effect on output and growth. For example, the Bank of England (BofE) could purchase the bonds of a National Infrastructure Bank encompassing housing investment activity.

If the housing operations of the BofE were effectively designed, implemented, and then managed, it could potentially lever-in substantial private housing investment

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[4] The Centre for Progressive Capitalism has produced some detailed pioneering research and other policy papers on this, see, for example, http://progressive-capitalism.net/2016/06/bridging-the-infrastructure-gap.

[5] Asocialdemocraticfuture will publish in spring 2018, an analysis: Getting at the Root: deflating land costs directly.

including pension monies through the application of appropriate risk sharing mechanisms underpinned by carefully designed guarantees. The housing assets provided as a result should rise in value in real terms and generate rising real income yields over the long term, making such assets attractive to pension funds as a match to their long term liabilities.